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**SMUG BYTES**

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P.O. Box 101 Butler, WI 53007

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**THIS MONTH:**

- Bill On Mscript.

- Note on ARTWORX

- Rudy's "SQ" NOTES

- Presidents Message

- And Other Great Things

If any articles are copied  
please credit SMUG Bytes

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**NEXT MEETING DATE: 9/14/88**

Send all contributions by the  
first day of the month to:

Bill Heberlein  
Editor  
SMUG BYTES  
5052 N. 91st Street.  
Milwaukee, WI 53225

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\* No set date. Call for info.

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\* Meeting on 4th Wed. of the month

\* QL - R. Hilsmann  
\* - 251 5291

\* Meeting date see Spectrum group

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NOTE NEITHER ANY AUTHOR OR SMUG BYTES TAKES ANY RESPONSIBILITY  
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FROM THE PRES.

Well this is the last month of summer and soon the snows of winter will appear. BOO. Well here are the swapfests comming up.

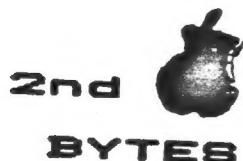
Sunday September 11, 1988. The FALL FEST 7am to 3pm in the parking lot of the Blackhawk Tech. Institute. Between Beloit and Janesville on Highway 51. \$2 per person and bring your own table. It's outdoors.

Sunday October 30, 1988. The LATE FALL HAMFEST open from 7am until you leave at the Lake County Fairgrounds. Routes 45 & 120, Grayslake Il. Enter from Hy. 45.

November 12, 1988. Friendly Fest from 8am to 1pm at the Serb Hall, 51st and Oklahoma, Milwaukee WI. \$2 in advance or \$3 at the door.

Thats all we know of so if you know of any others let me know.

It looks like no one will make the West Coast Computerfest but Dick, and Bill are going to the Cleveland Computerfest. They are driving and have room for another Sinclair computer nut. If you are interested let them know.



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## "SQ" NOTES

BY R.A.HILSMANN

This month a look at another program that has been around for a while, but does not support the new gismos we have hung onto the 2068, such as a centronic type printer. I am sure you all have a copy of it since it has been one of the first programs released for the 2068 and was written by one of the better software houses in Britain, namely PSION. VU-CALC has its limitations, especially if it is run in the 2068, since the 2068, as everybody knows by now, has less memory available in the bottom section of the available free RAM. VU-CALC as VU-FILE had been written for use in the SPECTRUM, and will not perform as well when run in the limited space available in the 2068. One runs out of space for variables rather fast, and therefore can not enter the same amount of information into VU-CALC as one could in the SPECTRUM. Yes it will do as well as in the SPECTRUM in a SPECTRUM EMULATED 2068.

I have made a few changes in the basic portion of the program to make it run with the OLIGER SYSTEM, and also made changes to support a centronic type printer. It is setup right now to support EPSON printer commands. If you have another printer, you will have to change the codes in the machine code portion of this program which I added. This can easily be done by poking the correct codes into the machine code. A list of the locations will appear right after the basic listing.

Here goes! Enter the programs you will find in the next columns preferably with the 2068 in the TIMEX mode. For the basic portion, you may load the original version of VU-CALC basic into the machine, and then make line by line changes.

```
10 CLEAR VAL "29327": BORDER 5
  PI: INK VAL "9": LOAD /"VCALC"
  "CODE
  60 LOAD /"VCPRINT"CODE : GO TO
  VAL "3200"
1000 GO SUB VAL "1100": LOAD /a$
  CODE : CLS : GO TO USR e2
1100 GO SUB VAL "1200": PRINT ""
  // "ENTER file name": INPUT a$: R
  ETURN
1200 PAPER VAL "7": BORDER SGN P
  I: CLS : RETURN
2000 INPUT "Print to 2040 Printe
  r<y/n> ";a$
2010 IF a$=="n" OR a$=="N" THEN GO
  TO VAL "2020"
2015 IF a$=="y" OR a$=="Y" THEN GO
  TO VAL "2060"
2017 GO TO VAL "2000"
2020 DIM l$(VAL "2"): POKE VAL "
  23658",VAL "8": INPUT "Printout
  to which column ";cc: INPUT "Pri
  ntout to which line ";l$
2025 LET cc=cc+VAL "7": LET ch=I
  NT (cc/VAL "256"): POKE VAL "620
  05",ch: LET cl=cc-(VAL "256"+ch)
  : POKE VAL "62004",cl
2030 LET ll=(CODE l$(VAL "1"))-VA
  L "64": IF CODE l$(VAL "2")>VA
  L "32" THEN LET ll=VAL "26"+(CODE
  l$(VAL "2"))-VAL "64"
2035 POKE VAL "62003",ll: LET cl
  =VAL "350"-cc: LET ch=INT (cl/VA
  L "256"): LET cl=cl-(VAL "256"+c
  h): POKE VAL "62000",cl: POKE VA
  L "62001",ch
2050 RANDOMIZE USR VAL "62006":
  GO TO VAL "2070"
2060 COPY
2070 GO TO USR e3
3000 GO SUB VAL "1200": PRINT AT
  VAL "9",VAL "2": "ENTER 1 : EXI
  T PROGRAM": TAB VAL "9";"2": CLE
  AR WORKSHEET": TAB VAL "9";"3":
  RETURN TO VU-CALC": INPUT "OPTIO
  N?";a
3010 IF a>NOT PI AND a<VAL "4" T
  HEN GO TO (VAL "3000"+a*VAL "100
  ")
3020 GO TO 3e3
3100 GO SUB VAL "1200": STOP
3200 DIM b$(VAL "100"): DIM c$(U
  AL "20"): DIM l$(VAL "2"): GO SU
  B VAL "1200"
3201 LET e1=VAL "29764": LET e2=
  VAL "29757": LET e3=VAL "29770":
  LET zz=VAL "34553": LET bfre=VA
  L "34562": LET dcontx=VAL "34140
  ": LET xcol=VAL "32880": LET xro
  w=xcol+LN PI: GO TO USR e1
3300 GO TO USR e2
4000 GO SUB VAL "1100": SAVE /a$
  CODE zz,(PEEK bfre+VAL "256"+PEE
  K (bfre+SGN PI)-zz): CLS : GO TO
  USR e2
5000 LET c$=STR$ VAL b$: GO TO U
  SR dcontx
9000 GO SUB VAL "1200": PRINT ""
  // "ERROR was at": // "COLUMN ";PEEK
  xcol+SGN PI
9100 LET a=PEEK xrow: LET b=INT
  (a/VAL "26"): LET a=a-b*VAL "26"
  : LET d$=CHR$ (b+VAL "64") +CHR$(
  a+VAL "65"): IF b=NOT PI THEN L
  ET d$=d$(VAL "2" TO VAL "2")
9200 PRINT "ROW ";d$: INPUT "
  Press ENTER TO CONTINUE ";x$: GO
  TO USR e2
```

```

9300 CLEAR VAL "29327": DIM B$(U
AL "100"): DIM C$(VAL "20"): LET
BFRE=VAL "34562": LET DCONTX=VA
L "34140": LET XCOL=VAL "32880":
LET XROW=VAL "32881": LET E1=VA
L "29764": LET E2=VAL "29767": L
ET E3=VAL "29770": GO TO USR E3
9400 CLEAR : SAVE /"UCALC" LINE
10: SAVE /"UCPRINT" CODE 62000,16
2: SAVE /"UCALC" CODE 29328,5225
9500 DATA 10,1,0,21,84,0,213,229
,197,245,237,91,48,242,33,13,135
,237,75,50,242,197,237,75,52,242
,219,127,203,103,32,250,126,254
,96,32,63,237,161,234,92,242,24,6
3,126,254,33,204,177,242,254,95
,204,180,242
9510 DATA 254,64,204,183,242,254
,35,204,186,242,254,34,204,189,2
42,254,58,204,192,242,254,39,204
,195,242,254,36,204,198,242,254
,59,204,201,242,254,38,204,204,24
2,254,63,204,207,242,211,127,237
,161,234,74,242,62,13,211
9520 DATA 127,62,10,211,127,193
,16,7,241,193,225,209,195,74,116
,197,25,24,149,62,12,201,62,9,201
,62,18,201,62,15,201,62,14,201,6
2,20,201,62,13,201,62,27,201,62
,11,201,62,10,201,62,24,201
9600 RESTORE 9500
9610 FOR x=62000 TO 62161
9620 READ a: POKE x,a
9630 NEXT x
9999 DELETE 9500,

```

Next load the code portion of VU-CALC into the machine. There are no changes in the this code, and it will run equally well in either the SPECTRUM or TIMEX mode. Now run the basic program you have entered with GO TO 9500, this will poke the 161 bytes of machine code into location 62000 to 62161. The program will delete lines 9500 to end, you could save the basic portion before you run it, since your entry would otherwise be lost. After all this, insert a disk, and save VU-CALC with GO TO 9400. Thats all there is to it folks.

How to run the new version of VU-CALC? Just as before, but you will be asked which printer you are using when printing time comes around. Well there is something else to learn, the printer codes have to be imbeded into your text, unless you elect to just print it all in pica type. The new version

of VU-CALC will give you all the commands available your printer can handle, this means all commands, even the ones which need an ESCAPE (27).

Should you for any reason run out of memory while using the program, try GO TO 9300, this will clear the variable area without wiping out the text. If it appears that you lost the text, move the cursor over the area where the text used to be, and it should reappear. Running out of memory will occur in the TIMEX mode most likely, especially after entering a lot of formulas for calculations.

Here now the new codes for VU-CALC, and what they will do!

- £ Tells the printer that the next characters are printer codes. The english pound sign has to precede all command sequences. Even if two or more commands are following each other.
- The underline symbol is to be inserted after the pound sign for Horizontal Tabulation. (Control Code decimal '9')  
Example = £\_
- & Character "&" gives the command "Perform Line Feed"  
(Control code decimal '10')  
Example = £&
- ; Character ";" gives the command "Advance Paper to Next Vertical Tab"  
(Control code decimal '11')  
Example = £;
- ! Character "!" gives the command "Advance Paper to Head of Next Page (Form Feed)"  
(Control code decimal '12')  
Example = £!
- ' Character "'" gives the command "Carriage Return (print out Buffer)"  
(Control code decimal '13')  
Example = £'

- " Character " gives the command "Select Double Width Print Mode with Automatic Cancel (Shift out)"  
(Control code decimal '14')  
Example = £"
- # Character "#" gives the command "Select Condensed Print Mode"  
(Control code decimal '15')  
Example = £#
- @ Character "@" gives the command "Deselect Condensed Print Mode"  
(Control code decimal '18')  
Example = £@
- :
- Character ":" gives the command "Deselect Double Width Print Mode"  
(Control code decimal '20')  
Example = £:
- ?
- Character "?" gives the command "Cancel Data on same Line"  
(Control code decimal '24')  
Example = £?
- \$
- Character "\$" gives the command "ESCAPE (prepares the printer to receive other control codes)"  
(Control code decimal '27')  
Example = £\$-1 would give the printer the command to select underline mode on an EPSON compatible printer.

£\$-1£\$-0 would select underline mode and deselect underline mode at the same time, but as you can see, each command has to be preceded by a pound (£) sign. But the DOLLAR (\$) SIGN gives the printer the ESCAPE CODE, which should be universal (decimal 27) on all printers around. This will open pages of commands you may insert into VU-CALC, and this should make use of just about anything your printer can throw at you. Remember though that all printer codes will not get printed and therefore do not exist in your text, so if you insert any such code in your text or calculations, you have to consider this

fact in the layout of our text.

Another thing I noticed, and this is something which happens when one returns from printing a page or two, you will have to enter any command twice to make it work. I have not tried to fix this, since it does not interfere with normal operation. Just one more quirk added to VU-CALC.

As to your layout, it is a good idea to leave the first (1) column free as a margin, this is a good place to enter your printer codes. Printout of a regular page will, when using PICA type, go to column 11 or 12 considering margins on either side. If you have a few lines that do not have text on them, you may enter line feed commands after your text, or on that line, this will allow you to enter a larger amount of text than VU-CALC would normally allow.

On the next page I have a letter head which I use in my business, this will give you an example of the layout before printout and also gives you an idea of what the finished product looks like after the printer gets through with it.

I hope you again have use for one of the oldies for your computer, even with all its limitations a good program.

This it again! I do not know at this time what I will have ready for the next issue of this newsletter. I am working on a few things at this time, and don't know if I will have them ready. As I mentioned some time ago, I am working presently on a few additions to the ROM for the SINCLAIR. At this time I have the DELETE, a RENUMBER, and bytes FREE routine finished. Next will be the ON ERROR routine, and after that I will have to see how much memory I have left to add other routines.

As in the past, all programs and routines you will find here in this column are released to public domain, and so will be any ROM ROUTINES in the future. If for some reason you wish to have a copy of a program you may send \$ 5 to:

IMPEX SOFTWARE - P.O. BOX 45 - MENOMONEE FALLS, WI. 53051

All programs will be send on cassette. Allow a few weeks for delivery. For all Club Members, all programs are available at the Club Meeting, please let me know ahead of the meeting date which program you would like.

Here something I have picked up on Packet Radio the other day.

#### GOVERNMENT SPECIFICATIONS FOR THE CONSTRUCTION OF A PIPE.

(From Amateur Radio, Wireless Institute of Australia, by VK3CFL)

All pipe is to be made of a long hole surrounded by plastic or metal centered around the hole. All pipe is to be hollow throughout the entire length. Do not use hole of a different length than the pipe.

The inside diameter must not exceed the outside diameter, otherwise the hole will be on the outside.

All pipes over 500 feet in length should have the word "Long Pipe" printed clearly on each end, so that the contractor will know that it is a long pipe. Pipes over two miles in length must also have the "Long Pipe" in the middle so the contractor will not have to walk the entire length of the pipe to determine whether or not it is a long pipe or a short pipe.

All pipes over 6 inches in diameter must have the words "Large Pipe" painted on it so the contractor will not mistake it for a small pipe.

Flanges must have holes for bolts quite separate from the big hole in the middle.

When ordering 90, 45 or 30 degree elbows be sure to specify right hand or left hand, otherwise you will end up going the wrong way.

Be sure to specify to your vendor whether you want level, uphill or downhill pipe. If you use the downhill pipe for uphill, the water will flow the wrong way.

All couplings should have either right hand or left hand threads, but do not mix the threads, otherwise, as the couplings are being screwed together at one pipe, it is being unscrewed at the other.

Thats all folks, may the force be with you. Till next month...

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## Bill on Mscrpt

This time I am going to cover TAB setting and use.

To set TABs you must go to the sub menu with the TAB (t=) request. To get there press the SYMBOL SHIFT and BREAK keys at the same time. You will now be able to set the tabs. Enter, either upper or lower case, t=xx,yy,zz. Where xx,yy,zz are the tab locations you wish to set. Note end with 80 if you wish to reset any tabs after your last entry. If you do not enter 80 any tabs following your last entry will remain in effect. Now suppose you went to the sub menu, SS & BREAK remember, and set tabs every 4 positions until the 32 position is reached. Your entry line should look like this:

Command ? t=4,8,12,16,20,24,28,80  
The problem you will find is 22 characters is the maximum number of entries allowed on the line. This includes the commas (,). Also note leading zeros are not used. After entering the tab sets press enter and they will be set. Check by looking at the bottom line with ----- . Each tab location will be indicated with a +.

Now when you wish to use the tab feature use the SS and Caps Shift, all at the same time, then press the 8 key. Note if you are tabing past the last tab setting then the the last tab will be to the end of the line. One other warning when MSCRPT is reloaded the new tabs will be lost unless you save MSCRPT with the new tab settings.

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TRACER 2068

SMUG Bytes Salutes  
**TIME DESIGNS**

Comment On Using  
Artworx

When I was using ARTWORX I created a screen with white ink and black paper. Since I didn't want to print in black paper but would rather print in black ink I would have to reverse both ink and paper. You can change the paper with the menu and the paper will change immediately but when the ink is changed nothing happens. I did not want to re-do the ink by re-entering the lines so, after saving the screen, I tried a few things. What I finally came up with is this:

First set the ink color. Now from the menu enter the RELOCATE mode. When the flashing square appears on the screen just place it around whatever is to have a changed ink color. Press the fire button, to turn on the relocate, then press the fire button again, to turn off the relocate. The ink color now should be the new color you set.

I don't know how many of you get TIME DESIGNS but in conjunction with their interest in the Sinclair line of computers they published a list of venders for our favorite computers. If the list is complete I don't know but I advise you to pick up a copy. In fact SUBSCRIBE! It's worth it. They also had a newsletter contest and we got a sixth place and for this I wish to thank TIME DESIGNS.

I am sorry no one got to the West Cost computerfest but if you had rode the train you would have been on your side for a while. It overturned on the way. We hope to purchase a set of their video tapes if any.

Well see you next month. If you have a date on top of your label that is your renewal date. I will send you a note in the last or the second last issue asking for a renewal. If you don't answer I will send one more issue and then stop.

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